UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,842	08/21/2003	Mark F. Eldridge	9-16313-1US	6148

7590 05/25/2004

Ogilvy Renault
Suite 1600
1981 McGill College Avenue
Montreal, QC H3A 2Y3
CANADA

EXAMINER	
THOMPSON, JEWEL VERGIE	

ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/644,842	ELDRIDGE, MARK F.	
	Examiner	Art Unit	
	Jewel V Thompson	2855	

-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/21/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. Acknowledgement is made of the Information Disclosure Statement filed August 21, 2003, which has been made record of and placed in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 4, 5, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahoney et al (5,773,726)

Regarding claims 1 and 9, Mahoney et al teaches a flow averaging probe and method for measuring fluid flow, comprising: an elongate hollow probe (4); a plurality of apertures disposed on the probe for receiving fluid flow therethrough (fig. 3); sensor means proximate the apertures for sensing accumulated fluid flow (32); transmitter means (24) for transmitting sensed data from the sensors (col. 2, lines 52-56); signal processing means for processing transmitted data (col. 2, lines 60-62). Mahoney et al does not explicitly teach discharge means for discharging fluid sensed by the sensor means and of the probe. However, Mahoney et al teaches apertures along the probe (fig.1), the probe is inserted into the conduit, where the fluid flows and the fluid is discharged through the apertures. It would have been obvious to one of ordinary skill in

the art at the time that the invention was made to have used the apertures located on the probe of Mahoney et al as a discharge for the fluid flowing through the conduit for the purpose of allowing the fluid to continue as it is being measured

Regarding claims 4 and 7 Mahoney et al teaches the apertures are equidistantly spaced along a longitudinal axis of the probe (fig. 3)

Regarding claim 5, Mahoney et al teaches a flow averaging probe for measuring fluid flow, comprising: a conduit (6); an elongate hollow probe (4) releasably connected within the conduit (fig. 1) and (col. 2, lines 27-28); a plurality of apertures disposed on the probe for receiving fluid flow therethrough (fig. 3); sensor means proximate the apertures for sensing accumulated fluid flow (32); transmitter means (24) for transmitting sensed data from the sensors (col. 2, lines 52-56); signal processing means for processing transmitted data (col. 2, lines 60-62). Mahoney et al does not explicitly teach discharge means for discharging fluid sensed by the sensor means and of the probe; and the probe is releasable. However, Mahoney et al teaches apertures along the probe (fig.1), the probe is inserted into the conduit, where the fluid flows and the fluid is discharged through the apertures. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the apertures located on the probe of Mahoney et al as a discharge for the fluid flowing through the conduit for the purpose of allowing the fluid to continue as it is being measured.

Regarding claim 10, Mahony et al, teaches fluid pressure is sensed at each aperture of the plurality of apertures (abstract).

3. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahoney et al in view of Dieterich 3,803,921

Regarding claims 2, 6 and 11 Mahoney et al fails to teach the probe includes connection means for connecting a plurality of the probes together. Dieterich teaches an upstream probe (12) and a downstream probe (14) connected via a plug (36). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the plurality of probes which are connected via a plug of Dieterich in the flow meter of Mahoney et al for the purpose of using the plurality of probes for returning the flow that has been sampled and being able to remove the probes for maintenance using the plug.

4. Claims 3, 8, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahoney et al in view of Rossow (5,233,865)

Regarding claims 3 and 8, Mahoney et al fails to teach the transmitter means and the signal processing means are integral with the probe and mounted integrally therewith. Rossow teaches in fig. 2E, the probe and transmitter integral with the processor. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the integral processor of Rossow in the flow meter of Mahoney et al for the purpose of providing time-averaged pressures measured at the various orifices (col. 14, lines 3-5)

Regarding claims 11 and 14, Mahoney fails to teach the step of generating a flow profile with averaged data. Rossow teaches in col. 13, lines 28-31, probe 22 measures the total average stagnation pressure. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have measured the average data as that of Rossow in the flow meter of Mahoney et al for the purpose of determining redundant values for the time-averaged static pressure and the cross-stream turbulence components (col. 14, lines 3-8)

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mahoney et al in view of Wible (5,913,250).

Regarding claim 12, Mahoney et al fails to teach the step of correcting for variations in fluid pressure at each of the apertures. Wible teaches in claim 10 that the computation element is structured to determine an uncorrected mass flow rate based on the output signals of the reference sensor and the active sensor and to determine a corrected mass flow by modifying the uncorrected mass flow rate based on the difference between the output signal of the pressure sensing element and a reference pressure value. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the correction process of Wible at each of the apertures of Mahoney et al for the purpose of modifying the fluid velocity in accordance with the pressure differences (abstract)

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5,442,958 Hagen teaches deployment probe combined with flush static port

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jewel V Thompson

jvt

EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800